

**What we Claim is:**

1. Image processing apparatus configured to store image data with redundant protection, comprising

5 input means configured to receive an input stream of real-time digital video data;

storage means for storing image data; and

processing means arranged to perform processing operations upon said image data, wherein

10 said input means receives an input stream of real-time digital video data;

said processing means performs a first writing operation to write said video data to said storage means in real-time without parity;

said processing means performs a reading operation to read said data from said storage means, perform a data manipulation upon said video data and generate parity information to create protected video data; and

15 said processing means performs a second writing operation to write said protected video data to said storage means.

20 2. Apparatus according to claim 1, wherein said real-time digital data represents high definition images defined by luminance samples and colour difference samples.

3. Apparatus according to claim 1, wherein said high definition digital video data is derived by scanning cinematographic film.

25 4. Apparatus according to claim 1, wherein said real-time digital

video data represents standard broadcast television images defined by luminance and colour difference signals.

5        5. Apparatus according to claim 2, wherein said luminance samples and said colour difference samples are converted to three colour samples before performing said writing step.

10       6. Apparatus according to claim 4, wherein said data manipulation step includes converting luminance plus colour difference signals into three colour samples.

15       7. Apparatus according to claim 1, wherein said data manipulation step includes generating reduced bandwidth proxy images and writing said proxy images to storage.

8. A method of processing image data to provide redundant protection, comprising the steps of

receiving an input stream of real-time digital video data;

performing a first writing step to write said video data to disk storage

20 without parity in real-time to implement a video capture;

reading said video data from storage;

performing a data manipulation upon said data read from storage;

calculating redundant parity data to generate protected image data;

and

25 performing a second writing step to write said protected image data to storage.

9. A method according to claim 8, wherein said real-time digital data represents high definition images represented by luminance samples and colour different samples.

5 10. A method according to claim 9, wherein said high definition digital video data is derived by scanning cinematographic film.

10 11. A method according to claim 8, wherein said real-time digital video data represents standard broadcast television images represented by luminance and colour difference signals.

15 12. A method according to claim 8, wherein said luminance samples and said colour difference samples are converted to three colour (RGB) samples before performing said writing step.

13. A method according to claim 8, wherein said data manipulation step includes converting luminance plus colour difference signals into three colour (RGB) samples.

20 14. A method according to claim 8, wherein said data manipulation step includes generating reduced bandwidth proxy images and writing said proxy images to storage.

25 15. A computer-readable medium having computer-readable instructions executable by a computer such that, when executing said instructions, a computer will perform the steps of:

receiving an input stream of real-time digital video data;

performing a first writing step to write said video data to disk storage without parity in real time to implement a video capture;

reading said video data from storage;

performing a data manipulation upon said data read from said storage;

5        calculating redundant parity data to generate protected image data;

and

performing a second writing step to write said protected image data to storage.

10        **16.** A computer-readable medium having computer-readable instructions according to claim **15**, such that when executing said instructions, a computer will also perform the step of converting samples representing luminance and colour difference to three colour (RGB) samples before performing said first writing step.

15        **17.** A computer-readable medium having computer-readable instructions according to claim **15**, such that when executing said instructions, a computer will also perform the step of converting luminance plus colour difference signals into three colour (RGB) samples during said data manipulation step.

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25        **18.** A computer-readable medium having computer-readable instructions according to claim **15**, such that when executing said instructions, a computer will also perform the steps of generating reduced bandwidth proxy images and writing said proxy images to storage during said data manipulation step.

**19.** A computer system programmed to execute stored instructions such that in response to said stored instructions said system is configured to:

receive an input stream of real-time digital video data;

perform a first writing step to write said video data to disk storage

5 without parity in real-time to implement a video capture;

read said video data from storage;

perform a data manipulation upon said data read from storage;

calculate redundant parity data to generate protected image data; and

10 perform a second write step to write said protected image data to storage.

**20.** A computer system programmed to execute stored instructions according to claim 19, wherein said data manipulation process generates reduced bandwidth proxy images and write said proxy images to storage.